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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,552	01/02/2004	Kazuo Nishi	0756-7243	8761
31780	7590	06/17/2005	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165				WARREN, MATTHEW E
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/749,552	NISHI ET AL.	
	Examiner	Art Unit	
	Matthew E. Warren	2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 March 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 17-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/18/05, 7/30/04</u> , 01/04 | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input checked="" type="checkbox"/> Other: <u>IDS (PTO 1449) of 1/2/04</u> . |

DETAILED ACTION

This Office Action is in response to the Election and Amendment filed on March 18, 2005.

Election/Restrictions

Applicant's election without traverse of Group I, claims 17-24 in the reply filed on March 18, 2005 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 2003/0166336 A1) in view of Yamazaki et al. (US 5,834,327).

In re claims 17-20, Kat et al. shows (fig. 5) a semiconductor device comprising a first semiconductor element (TFT 501) using a crystalline semiconductor film (polysilicon is used for the logic circuit portion-see [0065-0066]) as a first active region and a second semiconductor element (TFT 500) using an amorphous semiconductor film as a second active region, wherein the first semiconductor element and the second semiconductor element are electrically connected to each other (through contacts 507 not labeled). Kato discloses that the substrate (504) may be made of glass but does not

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specifically disclose the devices formed over the adhesive or over the plastic substrate. Yamazaki et al. shows (fig. 5c) TFT's having active regions of crystalline silicon or amorphous silicon formed over an adhesive layer (76) and non glass substrate (75). The substrate may also be a plastic to provide a light weight device having high shock resistance (col. 17, line 65-col. 18, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the glass substrate of Kato by using a plastic substrate as taught by Yamazaki to provide a light weight device having high shock resistance.

In re claim 21, a "product by process" claim limitation is directed to the product per se, no matter how actually made, **In re Hirao, 190 USPQ 15 at 17**(footnote 3). See also **In re Brown, 173 USPQ 685**; **In re Luck, 177 USPQ 523**; **In re Fessmann, 180 USPQ 324**; **In re Avery, 186 USPQ 116** **in re Wertheim, 191 USPQ 90 (209 USPQ 254** does not deal with this issue); and **In re Marosi et al, 218 USPQ 289** final product per se which must be determined in a "product by, all of" claim, and not the patentability of the process, and that an old or obvious product, whether claimed in "product by process" claims or not. Note that Applicant has the burden of proof in such cases, as the above case law makes clear. "Even though product-by- process claims are limited by and defined by the process, determination of patentability is based upon the product itself. The patentability of a product does not depend on its method of production. If the product in product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process." **In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985)**(citations omitted).

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In re claims 22 and 23, Kato discloses [0065-0066] that the first and second semiconductor elements are thin film transistors.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 2003/0166336 A1) in view of Yamazaki et al. (US 5,834,327) as applied to claim 17 above, and further in view of Shiotsuka et al. (US Pub. 2003/0134048 A1).

In re claim 24, Kato and Yamazaki show all of the elements of the claims except the semiconductor device including an optical sensor, a photoelectrical conversion element, or a solar battery. Shiotsuka et al. discloses [0059] that a device employing a plastic substrate and amorphous silicon active layer material can be used in a photoelectric conversion element being readily processed and having flexibility. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Kato and Yamazaki by forming the device for a photoelectric conversion element as taught by Shiotsuka to provide an easy manufacturing process and a flexible device.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamazaki et al. (US 6,204,519 B1) and Hayakawa et al. (US 6,858,898 B1) also show semiconductor devices having amorphous active regions or plastic substrates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEW
MEW
May 31, 2005

Tom *Thomas*
TOM THOMAS
SUPERVISORY PATENT EXAMINER